We claim:

1. A method of altering the immune response against an antigen comprising administering a composition comprising a binding agent, said binding agent induces the production of anti-idiotype antibody;

permitting said binding agent to specifically bind to a soluble antigen;

forming a complex between the binding agent and the antigen, said complex being capable of altering the immune response against the antigen.

2. The method of claim 1 wherein administering a composition comprising a binding agent includes a binding agent selected from the group consisting of one member of an immunologic pair; an antibody; a monoclonal antibody; an antibody fragment; a single chain antibody; a humanized antibody or fragment; a chimera antibody or fragment; a peptide; and a protein.

3. The method of claim 1 wherein the soluble antigen is associated with a human disease or condition.

4. The method of claim 3 wherein the human disease or condition is selected from the group consisting of cancer; tumor; drugs of abuse; multiple sclerosis; allergy; human immunodeficiency virus; bacterial infection; autoimmune diseases; human viruses; and asthma.

5. The method of claim 4 wherein cancer is a cancer selected from the group consisting of breast, ovarian, prostate, and gastro-intestinal cancers.

6. The method of claim 1 wherein the antigen is a multi-epitopic antigen.

7. The method of claim 1 wherein the binding agent induces an immune response.

8. The method of claim 1 wherein forming a complex between the binding agent and the antigen comprises exposing a previously inaccessible epitope.

9. The method of claim 8 wherein inducing an immune response includes producing an anti-idiotype antibody that binds to said epitope.

10. The method of claim 7 wherein the immune response is a cellular response.

11. The method of claim 7 wherein the immune response is a humoral response.

12. The method of claim 7 wherein the immune response is a cellular and humoral response.

13. The method of claim 10 wherein the cellular response includes producing a T-cell that binds to the binding agent or the binding agent/antigen complex.

14. The method of claim 11 wherein the humoral response includes producing an anti-anti-idiotype antibody to an anti-idiotype antibody to the binding agent.

15. The method of claim 1 wherein administering a composition comprises administering a composition that includes at least one of a photodynamic agent; a binding agent - photodynamic agent complex or conjugate; one or more adjuvants; one or more excipients; one or more stabilizers; one or more imaging agents; one or more buffering agents; one or more dispersing agents; one or more effectors; one or more immunoadjuvants; one or more radionuclides; one or more toxins; and one or more enzymes.

16. The method of claim 1 wherein the binding agent and the binding agent-antigen complex are immunogenic.

17. The method of claim 1 wherein administering a composition comprising a binding agent includes administering a binding agent that specifically binds to a multi-epitopic antigen.

18. The method of claim 1 wherein administering a composition comprising a binding agent comprises administering a binding agent that has been activated.

19. The method of claim 18 wherein administering a binding agent that has been activated comprises administering a binding agent that has been exposed to radiation.

20. The method of claim 1 wherein administering a composition comprising a binding agent comprises administering a native antibody.

21. The method of claim 18 wherein the binding agent has been exposed to UV radiation.

22. The method of claim 1 wherein the binding agent/antigen complex or parts thereof is an immunogen.

23. A method for inducing the production of idiotypic antibodies in vivo comprising administering a composition comprising a binding agent and at least one of the following components: at least one of a photodynamic agent; a binding agent - photodynamic agent complex or conjugate; one or more adjuvants; one or more excipients; one or more stabilizers; one or more imaging agents; one or more buffering agents; one or more dispersing agents; one or more effectors; one or more immunoadjuvants; one or more radionuclides; one or more toxins; and one or more enzymes;

said binding agent comprising a binding agent that induces the production of an anti-anti-idiotype antibody.

24. A method for treating cancer comprising:

contacting a tumor-associated antigen expressed in the host with a composition comprising a binding agent that specifically binds to a single epitope on the tumor-associated antigen;

allowing the binding agent to bind to the antigen to form a binding agent-antigen complex; and

allowing a host immune response to said complex.

25. A method for eliciting an immune response comprising

contacting a multi-epitopic antigen expressed in the host with a composition comprising a binding reagent that specifically binds to a single epitope on a tumor-associated antigen; and

allowing the binding reagent to bind to the antigen to form a reagent-antigen pair, whereby the formation of the reagent-antigen pair elicits a host immune response.

26. A method of designing new therapeutic agents comprising selecting a soluble antigen; and selecting a binding agent that specifically binds to said antigen to form a complex, a portion of said complex including an epitope that is exposed when in the complex but not exposed when not in a complex; and whereby said complex generates an immune response *in vivo*.

27. A method of treatment comprising administering a conjugate comprising a photosensitizer bound to a binding agent, and activating the photosensitizer by exposing the photosensitizer to light of a predetermined wavelength.

28. The method of claim 27 wherein the photosensitizer is a perylenequinone.

29. The method of claim 28 wherein the perylenequinone is a hypocrellin B derivative.

30. A method of stimulating the production of antibodies that bind to an epitope on a soluble antigen comprising:

administering to a host a binding agent that binds to the soluble antigen;

forming a complex between the binding agent and the soluble antigen, wherein the formation of the complex exposes an epitope that is unexposed when the binding agent is not complexed to the antigen;

and allowing the host to generate an antibody that binds to the exposed epitope.

31. The method of claim 30 wherein the structure of the antigen is complementary to the structure of the antibody that binds to the exposed epitope.

32. The method of claim 1 wherein the binding agent increases the immunogenicity of the antigen.

33. The method of claim 1 wherein the binding agent decreases the immunogenicity of the antigen.

34. The method of claim 33 wherein the antigen is associated with anti-inflammation.

35. The method of claim 34 wherein the antigen is associated with rheumatoid arthritis.

36. The method of claim 1 wherein the complex increases the host immune response.

37. The method of claim 1 wherein the complex decreases the host immune response.

38. The method of claim 1 wherein the antigen is an antigen selected from the group consisting of CA 125; CA 15.3; CA 19.9; and prostate specific antigen.

39. The method of claim 7 wherein the antigen induces an immune response.

40. The method of claim 7 wherein the binding agent/antigen complex induces an immune response.

41. A method of altering the immune response against an antigen comprising

obtaining a body fluid containing a pre-determined antigen from a patient;

combining the antigen with a composition comprising a binding agent, said binding agent induces the production of an anti-idiotype antibody;

permitting said binding agent to specifically bind to the antigen to form a binding agent/antigen complex;

administering a composition containing the binding agent/antigen complex to the patient, said complex being capable of altering the immune response against the antigen.

42. A composition for inducing an immune response comprising a composition comprising a binding agent that binds to a soluble antigen to form a complex, said complex is capable of inducing a beneficial immune response.

43. The composition of claim 42 wherein the immune response is a cellular and humoral response.

44. The composition of claim 42 wherein the immune response is a cellular response.

45. The composition of claim 42 wherein the immune response is a humoral response.

46. The composition of claim 42 wherein said binding agent includes a binding agent selected from the group consisting of one member of an immunologic

pair; an antibody; a monoclonal antibody; an antibody fragment; a single chain antibody; a peptide; and a protein.

47. The composition of claim 42 wherein said antigen is a soluble antigen.

48. The composition of claim 47 wherein said antigen is selected from the group consisting of cancer; tumor; drugs of abuse; multiple sclerosis; allergy; human immunodeficiency virus; bacterial infection; autoimmune diseases; human viruses; and asthma.

49. The composition of claim 48 wherein said antigen is selected from the group consisting of breast, ovarian, prostate, gastro-intestinal, and anti-inflammation antigens.

50. The composition of claim 42 wherein the antigen is multi-epitopic.

51. The composition of claim 42 wherein the complex changes the conformation of the binding agent, said complex having an accessible epitope accessible when the binding agent is complexed with the antigen.

52. The composition of claim 51 wherein the complex induces the production of an anti-anti-idiotype antibody to the accessible epitope.

53. The composition of claim 52 wherein the anti-anti-idiotype antibody is defined by blocking the binding of a second anti-anti-idiotype antibody to an anti-idiotype antibody that binds to the binding agent.

54. The composition of claim 49 wherein the antigen is an antigen selected from the group consisting of CA 15.3, CA 125, CA 19.9, and prostate specific antigen.

55. The method of claim 1 further comprising determining that the soluble antigen is multi-epitopic prior to administering the composition.

56. The method of claim 24 further comprising determining that the tumor associated antigen is multi-epitopic prior to contacting the antigen with the composition.

57. The method of claim 10 wherein the cellular response comprises a change in antigen presentation.

58. The method of claim 1 wherein the immune response comprises complement-dependent cytotoxicity or ADCC

59. The method of claim 24 wherein the immune response comprises complement-dependent cytotoxicity or ADCC

60. The method of claim 11 wherein the humoral response increases the complement-dependent cytotoxicity of the binding agent.

61. A composition for altering immunogenicity comprising a modified antigen, said modified antigen comprising an antigen bound to a binding agent.

62. The composition of claim 61 wherein the antigen is soluble.

63. The composition of claim 61 wherein the antigen is multi-epitopic.

64. A composition for altering immunogenicity comprising a binding agent that stimulates the production of antigen-reactive antibodies wherein the production of said antibodies provides a beneficial therapeutic effect.

65 The method of claim 64 wherein the antigen-reactive antibodies are AB3 and AB3'.

66. A method of altering immunogenicity comprising administering a composition comprising a binding agent that induces the production of AB3 and AB3'; and

permitting said binding agent to specifically bind to a soluble antigen.

antigen → Ab_1 → (antigen/Ab_1) $AB3'$

new antigen

Ab_1 → $Ab_{2,3}$ → Ab_3

67. A method of using a binding agent comprising administering a composition comprising a binding agent and allowing said binding agent to induce the production of AB3 and AB3'.

68. The method of claim 1 wherein administering a composition comprising a binding agent further comprises increasing antibody-dependent cell-mediated cytotoxicity and complement-dependent cytotoxicity.

69. A method of stimulating the production of antibodies which bind to an epitope on a soluble antigen comprising: administering a monoclonal antibody that specifically binds to a soluble antigen in an amount sufficient to stimulate the production of anti-anti-idiotypic antibodies that immunoreact with the antibody-antigen complex, wherein the production of anti-anti-idiotype antibodies provides a beneficial effect.

70. A comprehensive method for killing cells comprising administering a composition comprising an Ab1 antibody that induces the production of at least one of the following: molecules associated with a cellular response, molecules associated with a humoral response, Ab3, Ab3', ADCC, CDC, cytotoxic T lymphocytes, natural killer cells, cytokines, and chemokines.